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Female Agency in the Ministry of Education: Mary Medd's Contribution to School Design (1949–1972)

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This paper describes and discusses architect Mary Medd's input into school development within the Ministry of Education, responsible for England and Wales, during the post-war era, highlighting her agency and capacity to provide significant change in the discipline of architecture. Mary Medd's contributions were outcast on two fronts: first, by an institutional framework that prioritised anonymous civil service expertise, thereby suppressing individual attribution, and second, as one half of a prosperous partnership, both professional and personal, with David Medd. Although the collective processes that inexorably characterise the work dynamics within public institutions normally imply that any attribution to a single person is ambiguous, this paper suggests that the institutional framework should not be interpreted as a hindrance to the recognition of Mary Medd's authorship. Through archival work, and focusing on her design proposals, the Ministry of Education is interpreted as the very place where she decided to develop her agency as a woman, deeply engaged in education and architecture, to pursue the complete reconfiguration of school design in a national level. The ministry offered a place for the development of a different kind of architectural practice where her individual agency could be exercised both as a designer of spatial layouts and as the main catalyst of a holistic interdisciplinary collaboration. The paper embarks on a mission to reevaluate and celebrate Mary Medd's crucial role in the evolution of education architecture through an analysis of her diaries, notebooks, and drawings. In addition to repositioning Mary Medd within the annals of architectural history, this research aims to contribute to the ongoing historiography of feminist research methods and ideologies within the field. By shedding light on the gendered disparities in architectural history and emphasising the importance of acknowledging women's contributions, this study adds to the broader conversation on gender equity in design and education, ultimately enriching our understanding of the multifaceted history of architectural practice.

Keywords: Educational architecture; feminist history; architecture; Welfare State

Introduction

Mary Medd (née Crowley, 1907–2005), a pioneer in both education and architecture, remains under-recognised despite her pivotal role in shaping these fields. Catherine Burke (2013) notes that Medd's influence is largely recognised only by those who worked closely with her or who engaged with her ideas, attributing this obscurity to both her self-effacing nature and the challenges she faced as a woman in a male-dominated profession. Her Quaker upbringing, as described by Lynne Walker and Andrew Saint (2005), instilled in her a strong sense of discipline, self-abnegation, and reticence — qualities that shaped her approach but may have contributed to her limited public recognition. Yet Mary Medd's contributions continue to resonate, revealing the depth of her impact on modern educational architecture.

In 1977, architect Susana Torre ignited an important conversation in her book, *Women in American Architecture: A Historic and Contemporary Perspective*. Torre's work raised a fundamental question: what were the circumstances that either supported or hindered the full technical and expressive achievement of women in the field of architecture? In her research, she delved not just into the individual accomplishments of women architects but also into the institutional structures and societal factors that either facilitated or impeded women architects' journey towards professional proficiency. Likewise, numerous scholars have taken account of women's participation in architectural practice, which was very limited until the late 19th and early 20th centuries (Cuff 1992; Adams and Tancred 2000; Rendell et al. 2000; Stead 2014; Stratigakos 2016). The last century has witnessed a gradual transformation, as women have consciously challenged many aspects of the received gender roles. This challenge has been a powerful force in situating women within the historical narrative, both by increasing their participation in the public domain and by documenting their past contributions to culture, science, and art. Torre's analysis of the historical factors shaping women's pursuits in the field of architecture highlights the importance of understanding the journey women architects have embarked upon.

This article examines the agency and contribution of Mary Medd, an architect who was 'the undisputed expert on school-planning in post-war Hertfordshire, who went on to become an influential architect in the planning of English schools for thirty years after the Second World War' (Saint 2003: 56). Authorship and agency play significant roles in feminist epistemologies. While authorship generally refers to the act of creating something, agency refers to the capacity of individuals to act independently and to navigate, respond to, and potentially change social structures.[1] Through her writing and related activities, Medd wielded an impressive amount of influence in the formulation of school planning and architectural policies (Maclure

1984; Saint 1987; Franklin 2012; Burke 2013; Lacomba Montes 2020). She was one of the 'pioneers' who constituted the first cohort of female graduates from the Architectural Association, London, along with Judith Ledeboer, Margaret Justin Blanco White, and Elizabeth Chesterton (Darling and Walker 2017). According to Elizabeth Darling, 'their collaborations with progressive women in arenas related to architecture placed them at the heart of the development of the British modern movement, and they helped to shape its commitment to improving lives' (Darling and Walker 2017: 28). As historian Catherine Burke has accounted on her biography of Mary, *A Life in Education and Architecture: Mary Beaumont Medd* (2013), through official bulletins, called Building Bulletins, Medd was able to postulate trenchant insights on architectural issues, communicating with both the profession and the general public. More than just acknowledging her as a woman within a big institution, this paper looks at how her notes, letters, diaries, and drawings not only shaped the design strategies that reconceptualised post-war school design in England but were also influential in other European countries.

Many scholars who have studied the phenomenon of British school construction acknowledge the architectural work done by both Mary Medd and David Medd, as a husband-and-wife team, all agreeing that the two developed proposals through optimal coordination (Seaborne and Lowe 1978; Maclure 1984; Saint 1987; Franklin 2012). David Medd (1917–2009), who was also an architect (he graduated from the AA, and in 1941 served at the Camouflage Development and Training Centre in Farnham with Stirrat Johnson-Marshall), worked closely with Mary on prototypes for school structures. He developed the technical and constructional side (prefabricated systems in most cases) and designed furniture pieces that would equip many of the schools. Burke highlights how Mary's deep interest in the condition of childhood and possibilities of education, combined with David's exceptional energy and application to solving technical problems made the couple a powerful force for change (Burke 2013: 100). David passionately defended his wife's role and was critical of an author who incorrectly credited the work they did together to only him: 'Do you realise who has seen more clearly than anyone else the planning implication of educational activity, and who has fundamentally changed the pattern of a school plan in the last twenty-five years?' (Medd 1970: 5). Mary was most invested in the conceptual and typological development of the schools, rooted in research, since it was she who 'made contacts with the best teachers, learned what they were trying to do and watched children in and out of classes' (Burke 2013: 4), while David was responsible for the more technical aspects, including materials and furnishings (Oddie 1963). Yet from 1949 until the 1970s, her role in developing design and expertise within the Ministry

of Education — responsible for only England and Wales, as Scotland and Northern Ireland had their own systems — was offset both by an institutional framework that emphasised anonymous civil service and by her partnership — professional and personal — with David.

However, in the personal papers of Mary Medd (part of the Medds' Collection at the Institute of Education at University College London), we discovered a number of intriguing handmade drawings, so far unexplored. These historical documents show, as we discuss below, that it was precisely Mary who developed a particular working dynamic that resulted on a school system utterly different from conventional arrangements. The paper thus delves into the role of Mary as one of the acknowledged leaders of a research group — the Development Group — working within a public institution and reveals a practice marked by collaboration, dialogue, and participation. Mary Medd's career demonstrates the dynamics that can arise within an institutional framework, similar to other cases like those of Jacoka Mulder in the Netherlands (Vlassenrood 2021) and Karola Bloch in the GDR (Siegele 2022). On the one hand, this institutional framework facilitated her design process by providing specific conditions that defined her practice, but on the other, it led to the dissolution of her authorship, a concept worth investigating. Although scholars like Saint have thoroughly and accurately pointed out that this intense and critical collaborative process is an exception arising from a series of coincidences during a specific period when the issue of school construction was being addressed at the national level (Saint 1987), an exploration of Mary Medd's personal network of intellectuals, the dynamics at the ministry reflected on her diaries and notebooks, and a brief look at her design proposals and her drawings together show that this way of working was possible thanks to Mary Medd's commitment to educational and architectural innovation — *her* way of approaching design and *her* belief in collective processes.

Rather than exploring Mary Medd's contribution as an individual accomplishment, we situate it within its institutional and historical context and acknowledge that feminism, in its various forms, has faced challenges in extending its principles to all women on an equal basis. Black, working-class, lesbian, trans and bisexual, disabled, non-Western, and non-Christian women have frequently been excluded from what theorist Chela Sandoval terms 'hegemonic feminism' (Delap 2020: 5). We are aware of and believe in the necessity to recognise the 'discrepant histories of different women's movements', as described by Mrinalini Sinha, movements marked by disputes, conflicts, and power dynamics. We strive to situate our knowledge within its appropriate context while acknowledging that Mary Medd was a white, privileged Quaker woman. Nonetheless, we believe that her contribution to architecture

— particularly to school design — is worth discussing, as she confronted existing dynamics towards a more inclusive and collective understanding of architectural practice and the role of public institutions in advancing architectural discourse. The paper argues that the design process itself was made possible by the unique institutional framework within which the architect operated, the British Ministry of Education, while concomitantly leading to that dissolution of her authorship which is prevalent within mainstream architectural historiography and its topics of co-authorships, institutional collaborations, and the anonymous contributions of women within or even alongside the canon of architecture. The emphasis in this paper on agency, which therefore seeks to uncover and celebrate the often-overlooked contributions and actions of women in various historical contexts, helps to dissect the nuanced ways in which women like Mary Medd have actively engaged with institutional frameworks, contributing to transformative changes within their respective fields. In essence, the interplay of innovative architectural concepts, gender representation, and institutional support creates a compelling contribution to feminist historiography. By unravelling the agency of Mary Medd and acknowledging her profound influence on school design, a more inclusive narrative evolves that recognizes the multifaceted roles of women in shaping the world we live in, thereby enriching our collective understanding of history.

Architecture, Education, and the Welfare State

Prior to the end of the 19th century, schools were places for instruction, discipline, and the transmission of knowledge and imposed regulated and uniform dynamics upon students. However, early 19th-century educational theorists like Johann Heinrich Pestalozzi and Friedrich Fröbel and 20th-century ones like Frederik Lister Burk, Maria Montessori, and John Dewey focused on the development of new educational theories that promoted an educational system where children could develop their imagination and critical thinking from a young age (English 2021). These pedagogical advancements greatly influenced the design of educational spaces, as evidenced by scholars such as Alfred Roth (*The New School*, 1950), with spaces now conceived as home-like environments rather than institutional ones (Ogata 2008). This architectural evolution of learning environments became prevalent after the two world wars, when European states began to develop nation-wide educational guidelines and programmes for the construction of infrastructure for public education, including primary and secondary schools.

After 1945, work dynamics and design innovations in the development of schools within the Ministry of Education had a remarkable impact on the advancement of not only Britain's national educational infrastructure (Saint 1987) but educational policies

and building guidelines all throughout Europe (Châtelet 2021; de Coninck-Smith 2010; Burgos 2007; Ministerie van Onderweijs en Wetenschappen 1962). During and after World War I, the state became increasingly involved in architectural patronage through an expanded role in housing provision, while the rise in the school leaving age (following the Education Act of 1944), a growing population, and expanding suburbs all called for more school-building efforts. Up to this moment, design work had been commissioned and conducted locally, either within local authorities or by external designers. After World War II, when British institutions worked intensively to rebuild the country and provide new housing and facilities for the population, many state schools were designed by architectural departments in public institutions at a level of cooperation described as 'the most powerful and complete bureaucratic machine of urban and architectural planning that has ever existed in the democracies of the West' (Montaner 1993: 35). The rebuilding effort was facilitated by two Acts of Parliament: the New Towns Act of 1946 and the Education Act of 1944. As a result, around 2,500 state schools were constructed in the couple of decades that followed.

While the central government assumed responsibility for the design of the country's educational services, it lacked a professional team to design and build schools in response to pedagogical innovations. There was a split between local and national government, with a rift between 'thinking' and 'doing' — the formulation of public policy and its implementation — and a gap between government directives and local authority actions (Saint 1987). In the late 1940s, cities were eager to build as many houses and schools as possible, but most lacked the staff or expertise to do so. On the other hand, a few progressive schoolteachers and inspectors had begun to adopt the 'Child-Centred Education Approach' in their methods. The Hadow Report, published in 1931, focused on the education of children aged 11 to 18 and emphasised a more flexible and balanced curriculum that incorporated both academic and practical subjects, fostering a well-rounded development of students.

This shift in educational philosophy not only influenced teaching practices but also prompted a re-evaluation of school design to create environments conducive to this approach. In Hertfordshire County, moving away from neo-Georgian stylistic concerns, a group of school buildings were designed between 1941 and 1949 under the direction of C. H. Aslin, where architects Mary and David Medd followed the principles of the Modern Movement. To make use of wartime materials, they opted for prefabrication and followed a design process that was later transferred to the Ministry of Education after 1949, when the Medds, along with other young architects, joined as public servants in charge of the Development Group, characterised by intense collaboration with professionals and future users of the centres. Despite the contribution of several professionals, Mary and David Medd asserted themselves as the leaders of the Development Group.

Development Group, Architects and Building Branch, Ministry of Education	
ARCHITECTS	
1948	Stirrat Johnson-Marshall
April 1949–51	Mary Medd
	David Medd
	Anthony Pott
	Michael Smith (formerly at Hertfordshire County Council)
	Donald Barron (formerly at Hertfordshire County Council)
	Maurice Lee
	James Nisbet (junior quantity surveyor at Hertfordshire County Council)
1952	John Price
	Patricia Tindale
	Barbara Price
	Guy Oddie
	John Kitchin
	Dargan Bullivant
	Peter Newnham
	Michael Ventris
1964–73	W.D. Lacey
ADMINISTRATORS	
	Anthony Part
	David Nenk
	William Pile
	Derek Morrell
HMIs (worked full-time with the Development Group in formulating briefs, expounding educational ideas and putting the architects in touch with teachers and schools interested in participating)	
	Leonard Gibbon
	Eric Pearson
	Christian Schiller

Table 1: The structure of the Development Group, 1948 to 1973, in which Mary Medd worked, showing architects, administrators, and Her Majesty's Inspectorate of Education (HMI). The Architects and Building Branch at the Ministry of Education was divided into the Development Group (which shaped the Ministry's technical philosophy on building and designed its schools; it was charged with research, building, theory, collaboration, design, and experimentation) and Territorials (responsible for approving annual programmes and individual school plans submitted by local authorities).

It was during this era that Stirrat Johnson-Marshall (1912–1981) assumed a supervisory role within the Ministry of Education to orchestrate the nationwide restructuring of school infrastructure processes. This effort led to the establishment of the Architects and Building Branch in 1948, a team of government experts formed to collaborate with local authorities on building schools. One of Johnson-Marshall's key tasks was to actively implement a set of ministry-designed projects, as he felt the Architects and Building Branch should not only approve or reject proposals but also demonstrate leadership in the design of schools. This new approach saw the central government team acting as facilitator, advisor, and researcher on behalf of local authorities, almost like a research arm that stayed ahead of developments while also keeping an eye on them. The objective was to extend the project development process through a series of related procedures that addressed educational needs and resource allocation issues across the country. Upon Johnson-Marshall's arrival, the Architects and Building Branch was divided into two parts: the Territorial Group, which was responsible for approving school projects submitted by local authorities, and the Development Group, which was responsible for research, theory, collaboration, experimentation, design, and construction (**Table 1**). The purpose of a research and design team within the ministry was to find innovative solutions to technical problems that could be applied globally and also to align schools with child-centred education approaches. By the end of 1948, Johnson-Marshall had brought together several architects with whom he had previously worked in Hertfordshire to take on this work in practice, with the goal of forming a team that shared a common approach to building and education. This team, which included the architects Mary Medd, David Medd, Patricia Tindale, and Anthony Pott, was responsible for the design and construction of more than thirty schools in England and Wales as part of the Development Projects signed by the Ministry of Education.

Knowledge in Collaboration: An Architect in the Ministry of Education

Social relationships and the networks these constitute are very relevant in explaining the process of knowledge creation, diffusion, absorption, and use (Phelps et al. 2012). Scholars often refer to such networks as 'knowledge networks', concerned with how the nature of actors' social and institutional embeddedness influences their creation, transfer, and adoption of knowledge. One of the key factors of the Ministry of Education's Development Projects was interdisciplinary collaboration, embraced and supported by the ministry, from planning to execution (**Figure 1**). The remarkable aspect of this collaborative experience, at various levels and involving professionals from diverse fields, particularly teachers, educators, and architects, was that it proved essential for the success of the architecture proposed by Mary and

David Medd. This multidisciplinary exchange was the foundation of all their work, which means that Mary Medd's work cannot be properly positioned without a closer look at this bigger pedagogical network of expertise, composed of both informal and institutional relationships that can be followed in her publications, notebooks, diaries, and correspondence.

Figure 1: Meetings between architects, educators and administrators (date unknown). Mary Medd is in the centre and David Medd on the far right. Source: Courtesy Paul Barnes, personal archive, Cambridge, UK.

According to Burke's account, the cultivation of these pivotal associations throughout Mary Medd's life culminated in the establishment and maintenance of a profound affinity between administrators and designers. Burke describes this particular style of administration, established by leaders within pioneering Local Education Authorities, as 'from the inside out': 'architects had to become as familiar as teachers with the everyday practices of schooling and the potentials within the built environment for enhancing learning through decision-making, observation, discovery, expression and attention to the visual' (Burke 2009: 426). As early as the 1940s, when Mary and David Medd started working on the design of educational facilities in Hertfordshire with John Newsom, and until the end of their lives, they believed that the school project could not be separated from educational needs, which were presented by teachers and interpreted by architects. In Burke's chapter 'Partnership and Networks', she argues that these 'key relationships were nurtured over a lifetime developing and sustaining a close rapport' (Burke 2013: 97). The methods of the Development Group were experimental, and its goal was to research

and to thus establish itself as a reference. Therefore, it was crucial to maintain communication with architects and administrators in local governments, as well as with other architectural firms interested in school design and construction. Thus, the Development Group kept the public informed of all aspects of their work through the Building Bulletin series. The first issue, published by the Ministry of Education in October 1949, was titled *New Primary Schools*. This publication reflected previous experience in school buildings in Hertfordshire County and the dynamics of the type of collaboration between teachers and architects that were mainly pursued by Mary Medd, who had a long-lasting interest in education:

> Teachers have a particularly important part to play; they are some of the people whose work will be most closely affected by the school premises, and it is essential that their ideas should be expressed and understood by the architects. They will think of new and different ways of using space to the best educational advantage, and will, in their turn, throw the challenge back to the designers. It is the architect's job to assimilate all these varying, and sometimes conflicting, requirements, to coordinate them with functional standards and with structural economy, and to translate them into space that will encourage its fullest educational use. (Ministry of Education 1955: 3)

These publicly disseminated Building Bulletins reported on specific schools and included many of the research results, but they are not sufficient to showcase the significant impact these multidisciplinary encounters had on the work of Mary Medd and David Medd. Historians Malcolm Seaborne and Roy Lowe (1978) emphasise the significance of educational organisations in shaping new schools, where architects, teachers, and administrators collaborated to draft briefs for new school designs. Another important aspect of the Building Bulletins is their anonymity. Although Mary and David generally compiled the results and wrote the reports (Burke 2013: 104–5; Medd 1998), the bulletins were published not according to individual authorship but as a collective experience by a group of public servants within the ministry, thus validating the collaborative ethos. This anonymity is also true for the few essays that Mary developed throughout her life, such as her only book, *A Right to be Children: Designing for the Education of the Under-Fives* (1976), which does not mention her name on the cover — it is only found in the foreword. Walker and Saint note in her obituary that 'Mary's main role was exhaustive attention to children's and teacher's needs and their human expression in subtle, modulated spaces, neither completely open nor closed. Working with invariable anonymity, she was contemptuous of fame' (2005). Meanwhile, David's single-authored publications were usually under his name.

As her diaries show, over the years Mary Medd established her own network of teachers in Hertfordshire, visiting existing schools for long periods, watching and listening to children and teachers, imaginatively assessing their problems and what was needed to overcome them. The relationships formed in Hertfordshire provided initial insights into teaching methodologies and expectations of new educational architecture. Of all the members of the Hertfordshire team, Mary was the one who had the strongest relationships with teachers and students, as she already had firm beliefs about the future of primary schools and how they would directly influence their designs. For instance, her appointments diary for her first year at the Ministry of Education already records meetings with Alex Bloom, a progressive secondary teacher at St.-George-in-the-East Central School, Cable Street, London, who was achieving remarkable things with the education of very poor children (Burke 2013: 98). Mary's notebooks include detailed accounts of her school visits and feature sketches showing the locations of various activities, elements, such as water supply and wall fixtures, and furniture, along with student headcounts and vivid descriptions of the spaces she explored and the people therein (**Figure 2**).[2] Some examples of the places she visited include King's Norton Nursery School in Birmingham and Beech Green Nursery School in Aylesbury. Within these sketches, the term 'domestic' is notably repeated in multiple annotations (**Figure 3**).

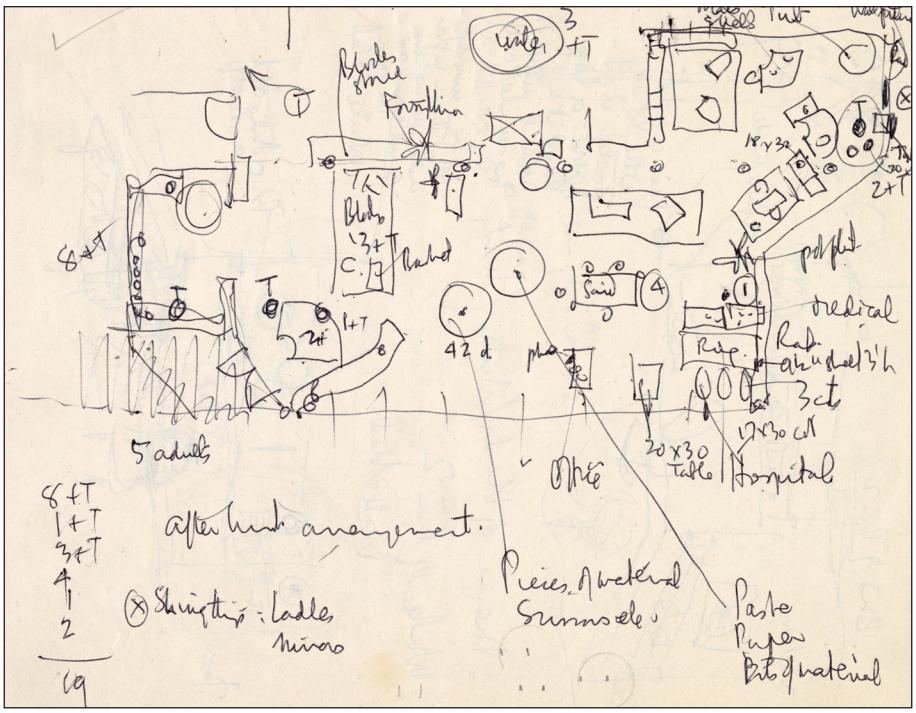


Figure 2: Mary Medd's sketches of schools. Source: Papers of David and Mary Medd, © Institute of Education archives (ME/L/6; folder 2), University College London.

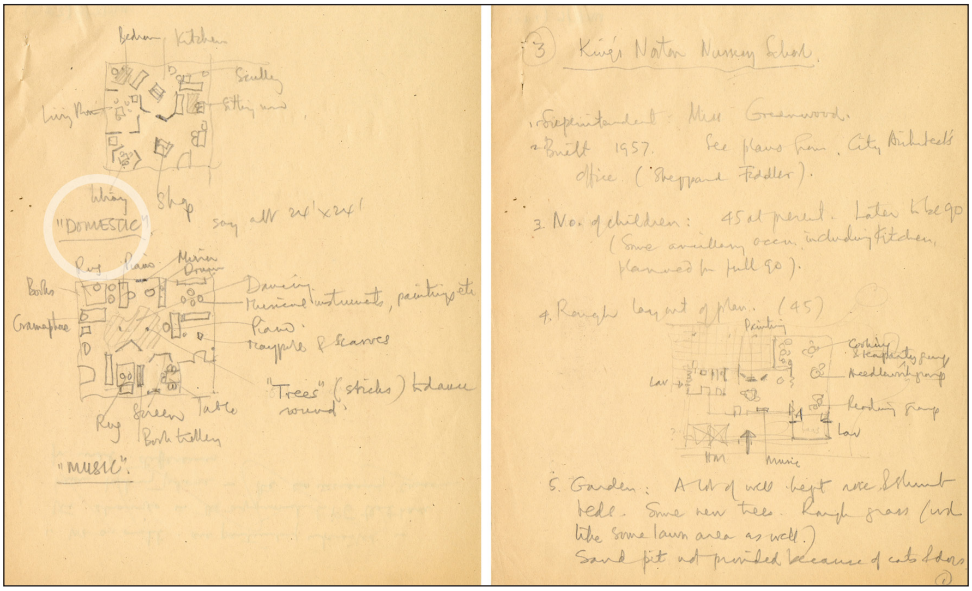
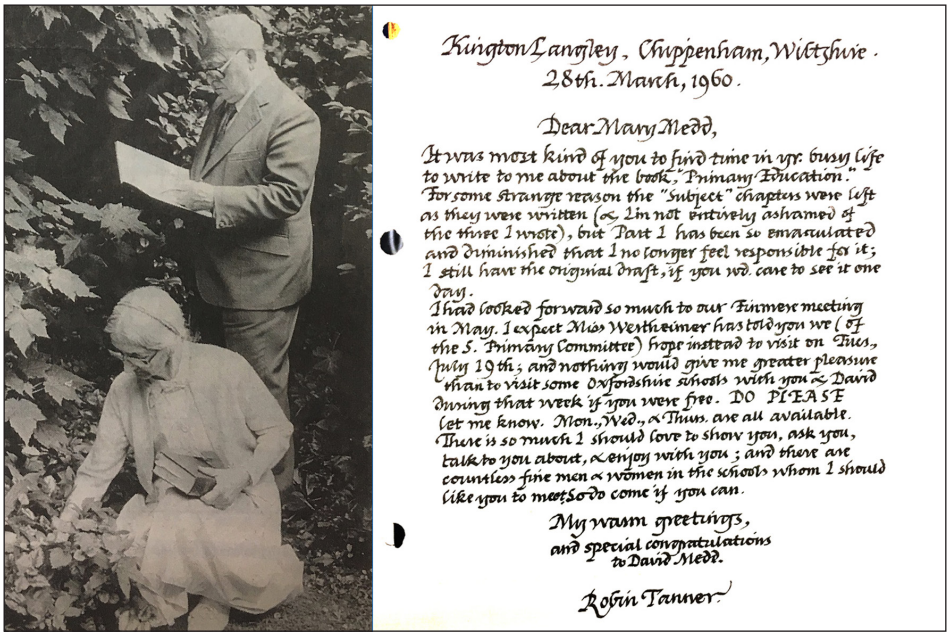


Figure 3: Mary Medd's drawings of interiors. Source: Papers of David and Mary Medd, © Institute of Education archives (ME/L/6; folder 2), University College London.

Within the institutionalised consultancy coordinated by Eric Pearson and Leonard Gibbon in the Development Group, it is possible to identify several people in the education field who played a major role in shaping the new spatial model. Collaboration between these figures and Mary Medd was crucial for adopting an architectural strategy of diversity. The most prominent figures were Christian Schiller, Robin Tanner, Heather Tanner, Leonard Marsh, Eric Pearson, and Edith Moorhouse. Each specialised in a different area — they were scientists, historians, poets, musicians, artists, or teachers — who not only had expertise in their field but also a passion for advancing education. In this collaboration, which was often informal, the needs of teachers, artists, inspectors, and pedagogues had to be expressed. It was the architects' task to translate those needs into actual spaces. The result was a set of specific standards and methods to facilitate learning, which Mary Medd later used to plan and design the appropriate spaces.

Robin Tanner, an English artist, etcher, teacher, and printmaker, and Heather Tanner, a writer and campaigner on issues relating to peace, the environment, and social justice, were a married couple who were devotees of the Arts and Crafts movement and lifelong socialists in the William Morris tradition, and part of Mary Medd's own network. The personal correspondence between Robin Tanner and Mary Medd, which dates from the mid-1950s until the late 1980s (**Figure 4**), reveals a close personal bond between them as well as a remarkable number of work-centred events,

like Mary's school visits to Bristol schools (Tanner 1955) and lectures in which Robin and Mary participated.[3] In an unpublished manuscript from 1977, 'Plowden Conference, the Way We Have Come', the Tanners acknowledge the influence of intellectuals such as Pestalozzi, Fröebel, and Rousseau in shaping the school model. The Tanners' connection to art and poetry and their dedication to engraving and depicting everyday scenes had a profound impact on the designs by the Medds. In addition, the Tanners' artistic pursuits demonstrated that they believed art could be a tool for personal growth. Their illustrations and writing convey a deeply humanistic personal viewpoint and a lifelong commitment to peace and conservation in a clear and inspiring manner. The Tanners and the Medds — most of the correspondence was directed to Mary Medd — continued their relationship through by conducting professional in-service courses for teachers, organised mainly by local education authorities, in the 1950s and 1960s at various locations, including Woolley Hall and Bingley in Yorkshire, Roehampton, Whitelands, Avery Hill, and Goldsmiths in London, and Bristol and Exeter. As the correspondence reveals, Mary and David Medd were invited by Robin Tanner on several occasions to present their projects to help teachers understand the significance of space in the learning process. These multidisciplinary courses were also valuable for architects, as they provided insights



Kington Langley, Chippenham, Wiltshire.
28th. March, 1960.

Dear Mary Medd,

It was most kind of you to find time in yr. busy life to write to me about the book, 'Primary Education.' For some strange reason the "Subject" chapters were left as they were written (& I'm not entirely ashamed of the three I wrote), but Part 1 has been so emasculated and diminished that I no longer feel responsible for it; I still have the original draft, if you wd. care to see it one day.

I had looked forward so much to our Finmere meeting in May. I expect Miss Westheimer has told you we (of the S. Primary Committee) hope instead to visit on Tues., July 19th; and nothing would give me greater pleasure than to visit some Oxfordshire schools with you & David during that week if you were free. DO PLEASE let me know. Mon., Wed., & Thurs. are all available. There is so much I should love to show you, ask you, talk to you about, & enjoy with you; and there are countless fine men & women in the schools whom I should like you to meet. So do come if you can.

My warm greetings,
and special congratulations
to David Medd.

Robin Tanner.

Figure 4: Photograph of Heather and Robin Tanner, and letter from Robin Tanner to Mary Medd, 28 March 1960. Source: © Crafts Study Centre, University for the Creative Arts; From the Papers of David and Mary Medd, © Institute of Education archives, (ME/Q/8/1), University College London.

into teaching practices. The ultimate goal of these meetings was to bring together individuals with exceptional artistic abilities to incorporate these skills into teaching practices and spark a discussion about the future of primary education. Heather Tanner argued that 'environment was one of the conditioning factors contributing to human happiness, which was in our domain' (Tanner 1964: 9–10). Thus, Robin and Heather Tanner's vision for education and the critical role of art in the curriculum had a significant impact on the design of the Development Projects through their ongoing communication with Mary Medd, although they were not directly involved in the Development Group.

However, the person who had a major direct influence on spatial proposals was probably Christian Schiller (1895–1976), a mathematician and school inspector since 1925, who was appointed as the Ministry of Education's first Staff Inspector for Primary Education in 1946 after the reorganisation of the Education Act of 1944 (Burke 2013). Schiller had a very clear vision of early education and how to bridge the gap between teachers and architects (Schiller 1971). He believed that in addition to art, movement was the primary means of expression and a crucial aspect of creative activity. The space where children grow and express their emotions was not just a geometric space but a 'personal space', which Schiller referred to as the 'common space', shared with others and belonging to the permanent world. Schiller believed that children are curious and active and seek new experiences; therefore, the classroom should be treated no longer as a confined space but rather as a centre for learning (Griffin-Beale 1979: 17). Children personalised the space, and this unique relationship and search for a secure place allows them to perform tasks. The same applies to time. Each child's time should not be not imposed from the outside: 'time and space cannot be separated, for they are but different aspects of the same mystery' (Griffin-Beale 1979: 43). Like the Tanners, Schiller emphasised the need to create an environment that enabled these possibilities of reinterpretation: means, time, and space. He saw the school as a wonderful invention intentionally designed to support the comprehensive development of students. He maintained an intense epistolary relationship with Mary and David Medd throughout their work at the ministry, as part of the official collaborations within the institutional framework (**Table 2**). The development of some of the typological innovations — which we briefly present in the next section — can be connected to Schiller's suggestions, which were also given space in some of the Building Bulletins.

To these personal exchanges we need to add other collaborations that took the form of institutionalised discussions and were conducted on a local scale, with each county having its own team.[4] Nonetheless, although all Development Projects involved links between architects and local teaching staff, there were specific cases, such as in

Development Group, Architects and Building Branch, Ministry of Education				
Woodside Junior School Amersham 1956–57	**Eveline Lowe Primary School** Southwark 1966–67	**Delf Hill Middle School** Lowmoor 1969	**Finmere Primary School** Oxfordshire 1958–59	**Ysgol Y Dderi** Dyfed 1976
Buckinghamshire County Council	Inner London Education Authority • Nora Goddard (LCC Inspector of Infants' Education and the Medds' principal educational contact) • Betty Aggett	Bradford Metropolitan District Council	Oxfordshire County Council • Edith Moorhouse (teacher) • Christian Schiller (inspector) • Robin Tanner (inspector) • Alan Chorlton (head of education committee)	Welsh Education Office

Table 2: Collaborative networks existed within the national Development Group, part of the Architects and Building Branch of the Ministry of Education (after 1964, the Department of Education and Science), and then between the Development Group and local authorities.

Oxfordshire, where the involvement of the teachers was particularly significant in the successful outcome of the project. The correspondence between the Medds and Edith Moorhouse, a primary school teacher and school advisor, and her written testimony in her two-volume manuscript 'A Personal Story of Oxfordshire Primary School: Vol. 1 (1946–56) and Vol. 2 (1956–68)' all attest to these links (Moorhouse 1985). The two volumes are a comprehensive and detailed diary of Moorhouse's experiences as a teacher. Finmere Primary School, one of the projects whose planning she participated in, was a school designed by Mary and David Medd, and this building plays a significant role in the story.[5] Finmere is a prime example of the built-in-variety process of design undertaken by the Medds (Lacomba and Campos 2018). Its construction was supervised by Patricia Randall Tindal, another English architect and civil servant who joined the Ministry of Education in 1949 and later moved to the Development Group to work on prototypes for school buildings.

Through an analysis of Mary Medd's correspondence and its overlap with design innovations, it is evident that these emotional and intellectual links were crucial in facilitating the understanding of progressive educational theories at the time, as well as in establishing a unique way of working. Through fieldwork and school

visits, international advising,[6] interaction with local teachers and children, and interdisciplinary collaboration and dissemination efforts, Mary Medd developed a wide knowledge network that, while not required, was one of her most important contributions to the dynamics within the ministry in the way it overlapped professional with friendship circles in support of the nation-wide development of educational infrastructure. Interestingly, it is mainly through this network of people — including her husband David — that we can today read about and reassess her achievements, as her work was hardly ever promoted outside these circles. Mary Medd is to be considered the initiator of many of these networks, within which she could develop her individual agency — rather than her authorship.

What Goes Inside Buildings: The Drawings by Mary Medd

One of the fundamental characteristics of the numerous schools designed by Mary and David Medd was a distinct richness of interior space, generous in corners together created a domestic atmosphere, an aspect highlighted in Mary's notes. This focus on interior spaces is captured by David, who remarked, 'as readers may have gathered, we are both (Mary and I) interested in what goes on inside buildings — Mary on educational organization and activity, and I on furniture, lighting and colour. … Of course, the exterior is important too, but we make the interior our starting point' (Medd 2009). The graphical materials in the archive — the drawing evidence — show that it was precisely the preponderance of designed interior spaces — those in direct physical contact with their users — as opposed to the focus on the exterior envelope, structural system, or constructed volume, that grants the Medds' architecture its distinctive features. Indeed, our previous research has shown how existing notions of domesticity can be identified in the school designs by the Medds (Lacomba and Campos 2021), proving that the concept of the interior was a foundational aspect of the Development Projects.

The predominance of the interior, understood as the site where action unfolds, where bodies navigate, learning occurs, inhabitants interact, and space is apprehended through the senses, was present from the earliest stages of the school project: from preliminary research and visits to existing schools to the way children appropriated and transformed the interior of the schools once operational. Mary Medd was in charge of the layouts and organisation which, compared to contemporary school types (Lacomba 2020), abandoned the conventional division of classrooms towards a more holistic understanding of the school and its activities. Therefore, an architectural analysis of the schools can be accomplished through a close look into Mary Medd's drawings, which contain the keys to these innovations. These drawings explain the origins of the strategies for a school project that seeks to be a sequence of rooms rather

than a division of independent spaces, described as 'built-in variety' (Franklin 2012), and that emerged from a close observation of the interiors of functioning schools. This architectural approach marked a departure from the traditional emphasis on the classroom as the primary room in school design, and instead introduced a sequence of spaces referred to as Planning Ingredients (Hall, Home Base, Bay (window), Quiet Area, Enclosed Room, General Work Area, Kiva, Veranda, Library, Sitting Area, Dining Room, Music Room, etc.) that became places by receiving a name, conferring a certain degree of domesticity on the interior — predetermined places designed with activity and the user in mind. The spatial order was thus determined by these places, whose terminologies could, unsurprisingly be associated with a house. Mary Medd sought to create an environment that encouraged a plural, specific, and diverse use of space.

The graphic language used in the drawings is closely related to her architectural approach. The diagrams, more so than drawings, are laden with annotations and exhibit an unconventional visual language (**Figure 5**). While they lack dimensions or measurements, they are highly intentional and rich in content regarding spatial

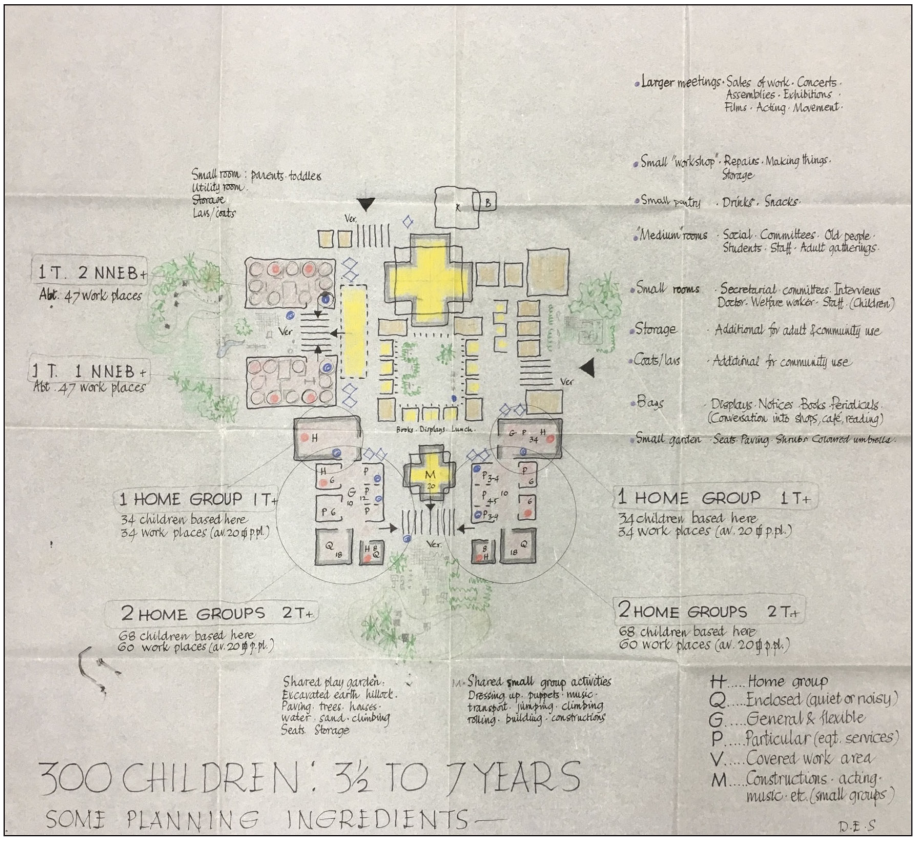


Figure 5: Drawings by Mary Medd. Papers of David and Mary Medd, © Institute of Education archives (ME/E/18/5), University College London. SubFonds ME/A: Personal Papers of Mary Medd (nee Crowley).

relationships and the school model they pursued. The diagrams do not define an overall envelope, for example; continuous lines appear only to represent the assemblies themselves, annulling the relevance of the façade as the interior-exterior boundary. Interiors are depicted as overlapping, conversing, and coexisting zones, with red and blue circles indicating focal points and water areas. In short, a particular language was used to describe the proposed system of fragments that formed a whole of small, interconnected units. Mary Medd focused on showing the proportion of rooms and their connections (using arrows), the relationship with covered outdoor spaces, and green areas. Generally, the representations are laden with intention but frugal in defining the places they propose.

The results of these drawings and the collective exchanges were instrumental in shaping the strategy of 'built-in variety', developed by Mary Medd and adopted by the Development Projects. The meetings were critical in re-examining questions such as, 'Are we designing based on "centres" rather than "classrooms"? If so, how do they impact the dimensions, content, and character based on the age of the students?' (Medd 1972). This initial discussion and collaboration with teachers and users within existing schools, along with documenting observations through drawings *in situ*, became the foundation of Mary Medd's work and allowed her to develop a new language and design approach that rejected a standardised distribution, proposing schools that were instead based on diversity and variety (Medd and Medd 1971). The shift away from the traditional role of the classroom in the school environment offered an innovative way of organising the interior space, allowing for a new relationship between the user and the environment.

By using photographs taken during a school's operational years, we can now re-examine the schools as they were used, always bustling with children and objects, though the images are captured without much consideration for aesthetics, such as framing, composition, and lighting, and without having organised the activities for optimal display (**Figure 6**). The schools embody a pragmatic architecture that built a framework for everyday experiences, regulating the interactions between the children and the environment. Although it is not possible to establish definite causal relationships, it is worth pointing out the similarities between the Planning Ingredients model and British domesticity (Lacomba and Campos 2021), which suggests that gendered relationships played a role in the design approach and that the typological peculiarities of the Development Projects, compared with contemporary models in different national contexts, can be clarified through a gendered analysis such as the one we are proposing here. Mary Medd, as developer of typologies rather than interiors or building execution, and within the ministry and a rich knowledge network, expressed her agency as a woman. The goal was to create an environment, an atmosphere that

Figure 6: Everyday life. Eveline Lowe School, London, 1970s. Photographic Archive of the Architects and Building Branch (ABB), Institute of Education (ABB/A/35/1), University College London.

would aid the learning process, resulting in a scene where architecture and the architect blend into the atmosphere.

Conclusion: Signed by the Ministry

This examination of the collaborative processes and Mary's contributions in the form of drawings and sketches that were subsequently transformed into designs reveals that we also need to discuss the place where these activities transpired, namely, the Ministry of Education, an institution of public governance. As Eve Worth has shown in *The Welfare State Generation: Women, Agency and Class in Britain since 1945*, the evolution of Britain into a welfare state opened up avenues for women to engage in professional roles that were previously considered suitable only according to gender (2021). In 1998, in an interview with Louise Brodie, Mary Medd was asked about whether she and David had contemplated pursuing private ventures following the war. She asserted that such a notion had not crossed their minds, as the public sector offered a plethora of highly captivating and extensive construction initiatives:

> I would be hopeless in a private practice, and I would not want to be there at all. I am interested in what is needed inside the building, or outside, and not just on what the exterior looks like in a good photograph. I am interested in the people who are going to live there, or to work there, or to be educated there and really know something about them if possible.
>
> In our case it was getting to know, with the help of teachers, and HMI´s, Her Majesty's Inspectors, and with local education officers and others up and down the country, discussing in detail what is going to go on inside a building. Working with a group of people we can each give our own small contribution in a way that works. (Medd 1998).

We see here how, for Mary Medd, the ministry not only offered a place for the development of her practice but also the possibility of a different kind of architectural practice altogether, where her individual agency could be exercised both as a designer of spatial layouts and as the main catalyst of a holistic interdisciplinary collaboration (which could be called the emotional labour). In fact, the influence of the collaborations on the schools designed by the Medds, particularly in defining the spatial brief, and the way in which the role of all parties involved in defining the proposals was highlighteds demonstrates the positive impact that public policies and their collective dynamics can have on architectural innovation. In an interview conducted by Lynne Walker in 1986 through RIBA, Patricia Tindale, an architect who worked alongside the Medds, indicated that their method of working in the Ministry of Education was really ideal: 'We were able with the HNI to go and visit a lot of schools already in use, where there were enlighten educationists; we talked with them about what their ideas were on education concepts and what kind of accommodation they required' (Tindale 1986: 8′). Contemporary feminist criticism has highlighted two issues which very much relate to these ideas broadly mentioned by Tindale: the concept of 'community' as a means of sharing the design process with all involved parties (Frichot, Gabrielsson, and Runting 2017), and the goal of creating working models based on dialogue rather than dialectics (Burns 2018). Mary Medd conceived of a model of participation that aimed to break down boundaries and bring ideas together. She engaged with professionals, teachers, and children to explore and understand what it meant to learn in a communal setting; she drew from her experience and always approached her work from a personal, human perspective, without a strong desire for individual authorship. As a consequence, the Development Group proposed a revolutionary school model in which the classroom was dissolved and spaces were evaluated not by their surface area but by their functions as working spaces: noisy, domestic environments where children could explore, live, and learn.

Engaging in such endeavours provided the most comprehensive opportunities for attending to intricate particulars within the broader scope of a project. At the Ministry of Education, it was possible to link research to construction, taking in all kinds of finer elements of the building interior in so doing — 'heating or lighting or colour … down to the door handles' (Medd 1998). Additionally, such institutional framework provided ongoing prospects for the advancement of knowledge through research and innovation, as well as for the widespread publication and dissemination of the findings across the nation.

This dynamic allowed her to approach architectural work in a way that departed from the traditional notion of the solitary architect and instead embraced the power of collective effort. The interplay of ideas and contributions within this institutional

context opened up new avenues for creativity and innovation. The notion of individual architectural authorship, which is widely contested in academia today, is understood as preventing those processes of invention and innovation that are often necessary for addressing a practice that is more collaborative than ever (Avermaete et al. 2023). The working dynamics developed within the Ministry of Education are an example where there is no 'single author', but where authorship was rightfully diluted. Instead of recognising the architects as the sole originators of ideas, we are presented with a space of possibilities, a field in which responsibility and commitment, although fully absorbed by creative work, are shared among multiple individuals. Concomitantly, the collaborative approach discussed throughout this paper led to the anonymity of the Medds — particularly Mary Medd — who were little known and rarely mentioned in the canonical books on architecture history, due to their role as civil servants within the ministry. The Development Projects were designated by the ministry as a promoting institution, and the officials in charge of the designs normally went unmentioned.

Within the Architects and Building Branch, the Medds were perceived as a 'power couple'. They took part together in 'hundreds of presentations and talks up and down the country and abroad, David with his carefully prepared lantern slides and Mary doing most of the talking' (Burke 2013: 103). For obvious reasons, it is almost impossible to recover those words that Mary spoke. However, as this paper has argued through a review of archival documents and her contact with educators, artists, and intellectuals, and despite the dissolution of the authorship of the Development Projects, her leadership was fundamental for the development of the long-lasting building networks which preceded and continued throughout the design process, known and admired national and internationally. Nonetheless, beyond recognising Mary's crucial role in coordinating and promoting the collaborative dynamic and defining the architectural model, her role can be usefully viewed from a gendered perspective. As Burke points out, 'the field of education, whose professional body was predominantly female, provided a form of architectural practice more acceptable to clients and the general public than more general architectural commissions' (Burke 2013: 33). Mary Medd's approach to design, coordinating a process that involved users and listened to all stakeholders, and dissolving her own authorship, is very similar to other historical cases of women architects working in public institutions. This suggests that the institutional framework should not be interpreted as a hindrance to Mary Medd's authorship recognition. On the contrary, it was the very place — its very conditions — where she decided to develop her autonomy and self-determination, deeply engaged in education and architecture, believing in a different way of working; she 'would be hopeless in a private practice', she said (Medd 1998). Ultimately, her work at the Ministry of Education exemplifies an architectural praxis other than the

male-dominated private practice. We interpret the dissolution of her authorship — in favour of a collective recognition — as the way in which Mary Medd decided to pursue the complete reconfiguration of school design at a national level.

As we scrutinise Mary Medd's contribution and the circumstances that shaped her professional life, it becomes evident that her career carries significant implications in the context of feminist critical theories. Her experiences underscore the need to explore and understand the entanglements of gender dynamics on the creative process. In essence, Mary Medd's journey within the Ministry of Education is a compelling case study for how institutional frameworks can both facilitate and transform an architect's practice. Furthermore, it prompts us to consider how the dynamics of collaboration and participation in architectural work challenge conventional notions of authorship. By examining the significance of gender in her professional life within the context of feminist critical theories, we gain a deeper understanding of the multifaceted nature of women's experiences in the field of architecture and the potential for transformative change within institutional settings. Mary Medd's professional network and intellectual exchanges and her drawings and design approach not only demonstrate that she embraced values that are different from conventional norms and expectations, as the new research-driven school types show, but also showcase her agency as a woman and her relevant critique of canonical narratives. Through the description of the networks and dynamics she built within the Ministry of Education, we acknowledge it as the space of possibility for the school innovations which transformed the traditional school prototype in the British context.

Notes

[1] The concepts of authorship and agency, while occasionally overlapping, are distinct and occupy significant roles in the feminist discourse and broader philosophical and sociological theories. In feminist theory, agency is a critical concept, especially in discussions about how women exercise control and power in their lives, resist oppression, and assert their autonomy in various social contexts.

[2] This archival material is part of the David and Mary Medd Collection, archived in the Institute of Education, University College London, specifically in SubFonds ME/A: 'Personal Papers of Mary Medd (nee Crowley)'. The set of hand-made drawings discussed in these paper are archived in the file ME/E/18/5 of David and Medd Collection at the Institute of Education, UCL.

[3] In the UCL Medds' Collection are the following letters to Mary Medd from Robin Tanner.

29th July, 1955
'Dear Mrs. Medd,
I have been trying for a long time to find a day or two to offer you for a visit to a few Bristol schools. I believe you would find a visit to Bath Academy of Art, at Corsham, a memorable one, and I enclose an invitation. [...] If it happened to suit you I could at any rate be free on Tues, July 12th to see a couple of live Prim. Schools in Bristol, and I am sure another colleague would readily be your host on the 13th if you needed one'.

'28th March, 1960.
...
Dear Mary Medd,
It was most kind of you to find time in your busy life to write to me about the book 'Primary Education'.... I had looked forward so much to our Finmere meeting in May. I expect Miss Westheimer has told you we (of the S. Primary Committee) hope instead to visit on Tues, July 19th; and nothing would give me greater pleasure than to visit some Oxfordshire schools with you and David during that week if you were free. There is so much I should love to show you, ask you, talk to you about, and enjoy with you; and there are countless fine men and women in the schools whom I should like you to meet.

'17th July, 1960.
Dear Mary,
In the absurd daily rush I tend to put off really pleasurable acts like writing to tell you how magnificent I think your draft is; and the leisure to write never comes, and I find myself about to meet you again without having shown even the courtesy of thanking you for sending the pamphlet to me. That is disgraceful and inexcusable.... We have had a wonderful term in Oxfordshire. I wish you two could come again.'

[4] The central government collaborated with the different local authorities, some of them 'new and educationally minded' (Franklin 2012: 324), as Oxfordshire, Leicestershire, the West Riding of Yorkshire, Bristol, and Inner London, to name the best-known examples, according to Geraint Franklin.

[5] In Edith Moorhouse's writings on Finmere Primary School, she recounts: 'I had previously accompanied Mary and David Medd when they were planning improvements at the one-teacher school at Nuneham Courtenay and saw how they followed the movements and activities of the children, both inside and outside the school, throughout the whole school day' (Vol. 1, 46). 'Since children use many materials which would not fit tidily into drawers or storage bins, some provision had to be made to house, for example, big sheets of card and paper, boxes, looms, as well as general school stock"(50). 'Mary and David Medd eventually produced sketch plans for this two-class school which seemed perfectly to marry the functional and the aesthetic. They saw the school building in the context of its environments, a bungalow type of building, simple in outline, with a copper roof which in time would merge with the grassy banks and tree-planted field'. (54) 'It was not just the general plan of the school that was so pleasing, in that it answered the needs of children and stimulated interests, but it was the harmony, the scale, the finishes which had been thought out so carefully, the heights, depths and widths of working surfaces, drawers and cupboards, the variety of furniture, all of which took away any feeling of an institution. Many visitors when entering the school said, "I could live here"' (56).

[6] According to the document 'Some Notes on Happenings (None on My Own)', written by Mary Medd, in 1952 she went to Poland with the town planning group, and in 1954 to Denmark, where they worked with the Danish School Development

Group in Copenhagen School of Architecture; in 1958/9 they travelled to the USA (David Medd's Harkness Fellowship) where they visited schools in 40 states (by car); in 1968 to Jersey; in 1969 to Colombia, the British Council British Secondary School in Bogota; in 1973 to Iran and Ethiopia; in 1974 to Fiji; 1975 to Wales; in 1976 to France; in 1978 to Venezuela; in 1979 to Brussels and to San Salvador; in 1980 to Botswana and to France; in 1982 to Zimbawe; in 1984 to Oman; in 1986 to Brazil; in 1990 to Pakistan. She remarks at the end: 'No mention made of "holiday travels" — which have been fairly wide-ranging' (Mary Medd's notes, Medd Collection, Institute of Education, UCL).

Competing Interests

The authors have no competing interests to declare.

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